

#### **405 KAR 1:250. Prime farmland.**

RELATES TO: KRS 350.450

STATUTORY AUTHORITY: KRS 350.028, 350.450

NECESSITY, FUNCTION, AND CONFORMITY: KRS 350.028 requires the Environmental and Public Protection Cabinet to adopt rules and administrative regulations for the strip mining of coal. This administrative regulation sets forth special requirements for the strip mining of lands containing prime farmland.

Section 1. Applicability. (1) Permittees of strip mining operations conducted on prime farmland shall comply with all applicable requirements of this chapter in addition to the special requirements of this administrative regulation.

(2) The requirements of this administrative regulation are applicable to any permit issued on or after August 3, 1977. Permits issued before that date and revisions or renewals of those permits need not conform to the provisions of this administrative regulation. Permit renewals or revisions shall include only those areas that:

- (a) Were in the original permit area approved prior to August 3, 1977; or
- (b) Are contiguous and under KRS Chapter 350 and applicable administrative regulations would have normally been considered as a revision of a previously approved permit.

Section 2. Definition. Prime farmland means those lands that meet the applicability requirements in Section 1 of this administrative regulation and the specific technical criteria prescribed by the Secretary of the United States Department of Agriculture as published in the Federal Register on August 23, 1977. These criteria are included here for convenience. Terms used in this section are defined in U.S. Department of Agriculture publications: Soil Taxonomy, Agriculture Handbook 436; Soil Survey Manual, Agriculture Handbook 18; Rainfall-Erosion Losses from Cropland, Agriculture Handbook 282; and Saline and Alkali Soils, Agriculture Handbook 60. To be considered prime farmland, soils must meet all of the criteria of this section.

(1) The soils have:

(a) Aquic, udic, ustic, or xeric moisture regimes and sufficient available water capacity within a depth of forty (40) inches or in the root zone, if the root zone is less than forty (40) inches deep, to produce the commonly grown crops in seven (7) or more years out of ten (10); or

(b) Xeric or ustic moisture regimes in which the available water capacity is limited but the area has a developed irrigation water supply that is dependable and of adequate quality (a dependable water supply is one in which enough water is available for irrigation in eight (8) out of ten (10) years for the crops commonly grown); or

(c) Aridic or torric moisture regimes and the area has a developed irrigation-water supply that is dependable and of adequate quality.

(2) The soils have a temperature regime that is frigid, mesic, thermic, or hyperthermic (pergelic and cryic regimes are excluded). These are soils that at a depth of twenty (20) inches have a mean annual temperature higher than thirty-two (32) degrees Fahrenheit. In addition, the mean summer temperature at this depth in soils with a zero horizon is higher than forty-seven (47) degrees Fahrenheit; in soils that have no zero horizon the mean summer temperature is higher than fifty-nine (59) degrees Fahrenheit.

(3) The soils have a pH between four and five-tenths (4.5) and eight and four-tenths (8.4) in all horizons within a depth of forty (40) inches or in the root zone if the root zone is less than forty (40) inches.

(4) The soils either have no water table or have a water table that is maintained at a sufficient depth during the cropping season to allow food, feed, fiber, forage, and oil seed crops common to

the area to be grown.

(5) The soils can be managed so that, in all horizons within a depth of forty (40) inches or in the root zone if the root zone is less than forty (40) inches deep, during part of each year the conductivity of saturation extract is less than (4) mmhos/cm and the exchangeable sodium percentage (ESP) is less than fifteen (15).

(6) The soils are not flooded frequently during the growing season (less often than once in two (2) years).

(7) The soils have a product of K (erodibility factor) X percent slope of less than two-tenths (2.0) and a product of I (soil erodibility) X C (climate factor) not exceeding sixty (60).

(8) The soils have a permeability rate of at least 0.06 inch per hour in the upper twenty (20) inches and the mean annual soil temperature at a depth of twenty (20) inches is less than fifty-nine (59) degrees Fahrenheit; the permeability rate is not a limiting factor if the mean annual soil temperature is fifty-nine (59) degrees Fahrenheit or higher.

(9) Less than ten (10) percent of the surface layer (upper six (6) inches) in these soils consists of rock fragments coarser than three (3) inches.

Section 3. Identification of Prime Farmland. Prime farmland shall be identified on the basis of soil surveys submitted by the applicant. The cabinet also may require data on irrigation, drainage, flood control, and subsurface water management. The requirement for submission of soil surveys may be waived by the cabinet if the applicant can demonstrate according to the procedures in Section 4 of this administrative regulation that no prime farmlands are involved. Soil surveys shall be conducted according to standards of the National Cooperative Soil Survey, which include the procedures set forth in U.S. Department of Agriculture Handbooks 436 (Soil Taxonomy) and 18 (Soil Survey Manual), and shall include:

(1) Data on moisture availability, temperature regime, flooding, water table, erosion characteristics, permeability, or other information that is needed to determine prime farmland in accordance with Section 2 of this administrative regulation.

(2) A map designating the exact location and extent of the prime farmland;

(3) A description of each soil mapping unit.

Section 4. Negative Determination of Prime Farmland. The land shall not be considered as prime farmland where the applicant can demonstrate one or more of the following situations:

(1) The slope of all land within the permit area is ten (10) percent or greater.

(2) Land within the permit area is not irrigated or naturally subirrigated, has no developed water supply that is dependable and of adequate quality, and the average annual precipitation is fourteen (14) inches or less.

(3) Other factors exist, such as a very rocky surface, or the land is frequently flooded, which clearly place all land within the area outside the purview of prime farmland.

(4) A written notification based on scientific findings and soil surveys that land within the proposed mining area does not meet the applicability requirements in Section 1 of this administrative regulation is submitted to the cabinet by a qualified person other than the applicant, and is approved by the cabinet.

Section 5. Plan for Restoration of Prime Farmland. The applicant shall submit to the cabinet a plan for the mining and restoration of any prime farmland within the proposed permit boundaries. This plan shall be used by the cabinet in judging the technological capability of the applicant to restore prime farmlands. The plan shall include:

(1) A description of the original undisturbed soil profile, as determined from a soil survey, showing the depth and thickness of each of the soil horizons that collectively constitute the root zone of the

locally adapted crops and are to be removed, stored, and replaced;

(2) The proposed method and type of equipment to be used for removal, storage, and replacement of the soil in accordance with Section 7 of this administrative regulation;

(3) The location of areas to be used for the separate stockpiling of the soil and plans for soil stabilization before redistribution;

(4) If applicable, documentation such as agricultural school studies or other scientific data from comparable areas that supports the use of other suitable material, instead of the A, B, or C soil horizon, to obtain on the restored area equivalent or higher levels of yield as nonmined prime farmlands in the surrounding area under equivalent levels of management; and

(5) Plans for seeding or cropping the final graded mine land and the conservation practices to control erosion and sedimentation during the first twelve (12) months after regrading is completed. Proper adjustments for seasons must be made so that final graded land is not exposed to erosion during seasons when vegetation or conservation practices cannot be established due to weather conditions; and

(6) Available agricultural school studies, company data, or other scientific data for comparable areas that demonstrate that the applicant using his proposed method of reclamation will achieve, within a reasonable time, equivalent or higher levels of yield after mining as existed before mining.

Section 6. Consultation with Secretary of Agriculture and Issuance of Permit. (1) The cabinet may grant a permit which shall incorporate the plan submitted under Section 5 of this administrative regulation if the cabinet finds in writing that the applicant:

(a) Has the technological capability to restore the prime farmland within the proposed permit area, within a reasonable time, to equivalent or higher levels of yield as nonmined prime farmland in the surrounding area under equivalent levels of management; and

(b) Will achieve compliance with the standards of Section 7 of this administrative regulation.

(2) Before any permit is issued for areas that include prime farmlands, the cabinet shall consult with the Secretary of Agriculture. The Secretary of Agriculture will provide a review of the proposed method of soil reconstruction and comment on possible revisions that will result in a more complete and adequate restoration. The Secretary of Agriculture has assigned his responsibilities under this paragraph to the Administrator of the U.S. Soil Conservation Service and the U.S. Soil Conservation Service will carry out the consultation and review through their State Conservationist, located in each state.

Section 7. Special Requirements. For prime farmlands to be mined and reclaimed, the applicant shall meet the special requirements of this section.

(1) All soil horizons to be used in the reconstruction of the soil shall be removed before drilling, blasting, or mining to prevent contaminating the soil horizons with undesirable materials. Where removal of soil horizons result in erosion that may cause air or water pollution, the cabinet shall specify methods of treatment to control erosion of exposed overburden. The permittee shall:

(a) Remove separately the entire A horizon or other suitable soil materials which will create a final soil having an equal or greater productive capacity than that which existed prior to mining in a manner that prevents mixing or contamination with other material before replacement;

(b) Remove separately the B horizon of the natural soil or a combination of B horizon and underlying C horizon or other suitable soil material that will create a reconstructed root zone of equal or greater productive capacity than that which existed prior to mining in a manner that prevents mixing or contamination with other material; and

(c) Remove separately the underlying C horizons or other strata, or a combination of such horizons or other strata, to be used instead of the B horizon that are of equal or greater thickness and that can be shown to be equal or more favorable for plant growth than the B horizon, and that when

replaced will create in the reconstructed soil a final root zone of comparable depth and quality to that which existed in the natural soil.

(2) If stockpiling of soil horizons is allowed by the cabinet in lieu of immediate replacement, the A horizon and B horizon must be stored separately from each other. The stockpiles must be placed within the permit area and where they will not be disturbed or exposed to excessive erosion by water or wind before the stockpiled horizons can be redistributed on terrain graded to final contour. Stockpiles in place for more than thirty (30) days must meet the requirements of 405 KAR 1:100, Section 4, with regard to storage of topsoil.

(3) Scarify the final graded land before the soil horizons are replaced.

(4) Replace the material from the B horizon, or other suitable material specified in subsection (1)(b) or (c) of this section in such a manner as to avoid excessive compaction of overburden and to a thickness comparable to the root zone that existed in the soil before mining.

(5) Replace the A horizon or other suitable soil materials, which will create a final soil having an equal or greater productive capacity than existed prior to mining, as the final surface soil layer to the thickness of the original soil as determined in subsection (1)(a) of this section in a manner that:

(a) Prevents excess compaction of both the surface layer and underlying material and reduction of permeability to less than 0.06 inch per hour in the upper twenty (20) inches of the reconstructed soil profile; and

(b) Protects the surface layer from wind and water erosion before it is seeded or planted.

(6) Apply nutrients and soil amendments as needed to establish quick vegetative growth. (4 Ky.R. 399; eff. 5-3-78; Am. 500; 5 Ky.R. 211; eff. 9-6-78; TAm eff. 8-9-2007.)